

In concluding my ornithological journal I wish to be allowed to offer my best thanks to Lord Crawford for his very great kindness in taking me with him, as Naturalist, during his journey round the world. It is obvious that on a voyage of this sort opportunities for collecting on land must be few and often hurried. If the result, as regards birds, appears to be rather meagre, I can only say that I did my best on every possible occasion. The number of specimens of birds obtained during the voyage was 225, all of which have been presented by Lord Crawford to the British Museum. The skins were made by my own hands, and labelled with date and locality. I have determined them mainly by comparison with specimens already in the National Collection, and hereby offer my very best thanks to Dr. Bowdler Sharpe, Mr. Ogilvie-Grant, and their excellent assistant Mr. Charles Chubb for the kind aid which they rendered me throughout.

IV.—*On the Breeding of some of the Waterfowl at Gooilust in the Year 1903.* By F. E. BLAAUW, C.M.Z.S.

ALTHOUGH the summer as well as the greater part of the spring of the year 1903 have been unusually damp and cold, yet waterfowl have bred well, and their chicks have nearly all survived. The first birds to breed at Gooilust were, as usual, the Cereopsis Geese (*Cereopsis novæ-hollandiæ*). They are kept in a six-acre enclosure, in which some Sunda oxen (*Bos sondaicus*) and antelopes (*Damalis albifrons*) are confined during the summer months, both being the respectful servants of the Geese. In the beginning of February the *male* (which is a great nest-builder for a Goose) made a rather elaborate structure on a heap of straw lying against the south side of a brick building which houses the above-named ruminants during the winter. The female laid five eggs and sat on them with great assiduity, notwithstanding occasional frost and snow. All the time the male kept a sharp look-out, and always stood over the nest whilst the

female took her daily round in quest of food. In due course five black-and-white chicks were hatched, which have all reached maturity.

Cercopsis chicks are very hardy and are well tended by their parents. They feed chiefly on young grass, while bread and, at a later period, buckwheat are welcome additions.

The first plumage of the young closely resembles that of the adults. The grey, however, is of a still more delicate shade and the round black marks on the wing-coverts are more numerous and more conspicuous. The legs, which are of a lead-colour at first, soon acquire the black-and-pink markings of the adult—after having passed through a greenish stage. The young birds moult their first plumage when about six months old. The flight- and tail-feathers, however, are retained until the second moult in the following year.

The next birds to lay eggs in 1903 were a pair of Sandwich-Island Geese (*Neochen sandvicensis*), a species which has become extremely rare in Europe of late years. These birds are kept at Gooilust in a small grass-grown enclosure, with plenty of shrubs and a wooden shed in it. As they are not happy in the frost and snow, I have them shut up in the shed every night after winter has set in. One good result of this arrangement is that the birds usually build a nest in the hay which covers the floor, and this makes it possible to protect them and their eggs from the cold weather that often prevails at the early season when they are accustomed to lay.

Last February five eggs were laid. These were all hatched, and during the whole time of incubation the male was constantly on the watch beside the female, running with great fury at everyone who came near.

The chicks are of a dark olive-green, darker on the head and back and whitish on the under parts. The tips of the wings are nearly white, the bill and legs black.

These birds grow very quickly, so that at the age of about nine weeks the wings have to be cut to prevent them from flying away.

The immature dress is very much like that of the adults, but the general tone is more grey than yellow, and all the black or brown markings are less clearly defined. The curious spiral ridges in the neck-feathering are already visible in the young bird. The yellow of the neck is greyish black, and is darker in the young males, so far as my experience goes.

At the end of July the young birds began to moult, and in about six weeks had acquired the adult plumage, the flight- and tail-feathers being retained, as in other young waterfowl, until the following year.

Of this particular brood of five, I had the misfortune to lose three when they were only half-grown. A very cold night seems to have been the cause of their death.

Of the Magellanic Goose (*Chloëphaga magellanica*) I reared a brood of four this year, two males and two females—being the produce of four eggs. It is worthy of note that in this Goose, as well as the nearly allied *C. dispar*, there are two *colour-forms* when the chicks are in down. Some of them are dark grey all over, being only slightly lighter on the underside, with black heads and whitish throats, whilst others have distinct dark markings on a nearly white ground and a light head with only a longitudinal dark mark on it. At first (for I had never bred these birds before) I thought that the dark chicks were females and the light chicks males. Afterwards, however, I found that the colour of the down had nothing to do with the sex of the birds. The young females get their yellow legs when the feathers begin to appear, and their first plumage resembles that of the old female except that the brown is duller and the black markings are not so well defined and seem thinner and more numerous. The young males differ from the adult male in not having the breast pure white, but striped with narrow blackish lines. Besides, all the markings are weaker and less conspicuous.

The shining green wing-bar is absent in the young birds of both sexes. At the end of September they begin to moult, and assume the adult dress in a couple of months. The green wing-bar, however, is not generally assumed until

the second summer, and the male does not get its white breast at once, but the colour increases gradually as the bird gets older.

A pair of the Black-banded Goose (*Chloëphaga dispar*) at Gooilust laid six eggs, which were all hatched. In the chicks of this species the differences in colour correspond with those of *C. magellanica*, but are intensified. Some of the chicks are most brilliantly marked with black and white, whilst others are almost entirely black. These striking colours, however, soon fade, so that after the chicks are a week old much of their brilliancy is gone.

The Ashy-headed Goose (*Chloëphaga poliocephala*) is certainly the finest, but also the most delicate, of all the Geese that I have had in my garden. The best way to ensure success with this species is to give a constant supply of cabbage, besides grass and grain. With care I have managed to keep it since 1890, having only once had to procure a fresh importation of two males. At the present time I am the happy owner of an old pair, three young pairs, and an odd male.

The female of my breeding pair laid five eggs last spring, from which four chicks were hatched. One of these died, but the remaining three have been doing well and are now in their first moult.

The chicks in down are uniform in colour, unlike those of the foregoing species. They have dark grey markings on the back of the head and neck on a whitish-grey ground. Their first plumage resembles that of the adults, but is much less brilliant. The breast is brownish and striped all over with blackish lines. The white of the belly is also less in extent. They begin their first moult in October, but seldom finish it until the following spring.

During cold nights, especially if there is snow on the ground, I have these birds driven into a shelter, and the birds of the year appreciate this arrangement very much.

The Ruddy-headed Goose (*Chloëphaga rubidiceps*) is the smallest of the South-American group, but thrives well under domestication. I obtained my first male of this species (an imported bird) in 1886, and at the same time I procured a

female from the Gardens of the Zoological Society of London. From this pair I have had numerous broods, and, unless I am very much mistaken, all the Ruddy-headed Geese now in Europe have descended from them. The old male, which is now mated to one of his daughters born in 1887 (his original mate having died six years ago), has been in my park for seventeen years, but nevertheless gave me this spring a brood of three young birds, which have done well and are now moulting.

The chicks of this species are marked with dark grey on a ground of whitish grey, and are the least conspicuously coloured of any of the group. The first plumage of this Goose also resembles that of the adults, except that the ground-colour as well as the markings are less clear and well defined. Thus, for example, the white of the wing is mixed with grey and the glossy green wing-bar is altogether absent. The legs, which at first are black, get their yellow markings when the chick begins to acquire its feathers. The young birds begin to moult at the end of September, generally completing the change before the new year.

Proceeding to the Maned Goose (*Chenonetta jubata*), I must allow that I have not yet had complete success with this bird. A year ago one of my females laid two eggs in April, dropping them about without making any nest. These two eggs were placed under a common hen, and, after twenty-eight days of incubation, were hatched. Unfortunately the hen killed both the chicks. They were, so far as I could judge from the mangled bodies, of a nearly uniform dark grey colour.

My old pair of Snow-Geese (*Chen hyperboreus*), which I have had since the year 1888, bred again last spring. They sat on three eggs only, but I believe that the nest had been robbed of part of its contents by a pair of Cranes. It was, as usual, full of down, and was situated under a bush near the edge of the pond. In about four weeks the three eggs were hatched.

The young of this Goose when in down is grey, darker on the back and lighter on the under side. The head is yellow,

with a dark mark on the occiput. The bill and legs are black. These birds grow very rapidly, much more quickly than the young of the Bernicles and their allies. The first plumage is extremely beautiful, especially when the feathers are just appearing between the still conspicuous patches of down. The birds then look as if they were clad in unburnished silver. Later, much of the delicate beauty of the coloration fades, and the plumage may then be described as follows:—

General colour silver-grey (with a very slight brownish tinge), darkest on the back and hind part of the neck, and nearly white on the breast and belly. There is a dark mark on the occiput, which is also observable in the downy dress. Each of the darker grey feathers of the back has a white edging, varying in width. The tail-feathers are white, with a grey spot in the centre. The large flight-feathers are black, although the black is not so intense as it is in the adult bird. The bill and legs, which are black in the chicks, soon become brighter. The bill gradually passes from black to pink. The legs, however, first change from black to yellowish grey or greenish, and to pink afterwards. In October the first white feathers begin to appear, and the birds gradually assume the white dress of the adult.

In former years* I have repeatedly bred young birds from a male of the Blue Snow-Goose (*Chen caerulescens*) and a white female of *Chen hyperboreus*, when the results of the union have invariably been Blue Snow-Geese, and not specimens intermediate in plumage between the two forms. This year a pair of these Blue Snow-Geese (the result of a mixed union) has bred, and the result has been a brood of four young, all recognisable at once as true Blue Snow-Geese.

The chicks of the blue form are quite different from those of the white form, being of a dark olive-green, darkest on the back and on the head, which is almost black. The first plumage is slaty grey throughout, being darkest on the head,

* See P. Z. S. 1899, p. 413.

which becomes white in the adult stage. But the larger wing-coverts have slightly lighter edgings. The first moult of this bird generally takes place in the end of October, and with it the white feathers of the head appear. At the same period the bill and legs gradually begin to become pink, instead of being dark, as they were up to that time.

I bred Ross's Snow-Goose (*Chen rossii*) in 1902, as already described in 'The Ibis' (1903, p. 245), but lost the chicks after about a fortnight. In 1903 the female laid eggs again, but they were unfortunately destroyed by vermin, so that I am not yet able to describe the first plumage.

My pair of Trumpeter Swans (*Cygnus buccinator*) bred again this season. Six eggs were laid and six chicks were hatched. The chicks are white, with a grey tinge on the back. The cere is covered with pure white down. The bill is flesh-coloured, with a dark tip, and the legs are also flesh-coloured. The down of these chicks is very short and dense, quite different from the longer and more fluffy down of the chicks of *Cygnus nigricollis* and *C. atratus*. The result is that the chicks look much smaller in comparison. A conspicuous feature is the long neck, which is carried very stiff and upright. At the age of about six weeks the first feathers appear, and the birds then begin to grow very quickly. The first feathers are brownish grey, without any markings as a rule, but one of this year's birds is remarkable for having transverse markings on the shoulders and greater wing-coverts. After the birds are feathered the bills gradually acquire the black colour, the black beginning at the point and at the forehead, and gradually increasing. Later, the middle part, which is still pink, gets spotted with black, and in the course of the February following the first summer the whole of the bill usually becomes quite black. The legs by that time have also gradually darkened into dusky grey, which becomes black after the birds are a year old. About March white feathers begin to replace the grey plumage, and when a year and a half old the birds are quite white, except for some fine grey spots, which are still visible on the back of the neck and on the head. *Cygnus buccinator*

never carries its chicks on its back, as *Cygnus nigricollis* and some of the other Swans are apt to do.

During the first days of the life of her chicks, the old female Trumpeter often retires to her nest for hours together, warming them under her, and she continues to do this during the night for a long time. Young Trumpeter Swans, when fully fledged, are very active birds. They fly with great ease, rising directly from the water into the air, without running over it at first with flapping wings, as so many of the larger waterfowl do. They also dive with great ease.

Of Bewick's Swan (*Cygnus bewicki*), I have not bred any yet, but in October 1902 a young bird of the year, which had been winged on the Zuiderzee, was brought to me. I had, therefore, opportunities of observing its juvenile dress and its changes of plumage.

The colour of the feathers was of a nearly uniform brownish grey, of a lighter shade than in a young Trumpeter Swan. The bill was flesh-coloured, blackish at the point, with a few black spots near the front, and lighter at the sides in front of the eyes. The legs were grey. By the following March the bill had become black, with a few flesh-coloured spots. The parts of the beak which in the adults are yellow were now well-defined and nearly white zones. The legs and feet were blackish. The grey plumage was at that time much intermixed with white. When a year and a half old the bird was like an adult, except that the neck had still some grey spots, as is the case with a young Trumpeter Swan of the same age.

I kept a pair of the African Comb-Goose (*Sarcidiornis africana*) for many years without their shewing any signs of breeding. Last summer, however, I saw the birds copulate repeatedly, and the female began to wander about restlessly in search of a suitable nesting-place. As she was pinioned and quite unable to fly, I was not a little surprised to find her one day in one enclosure and another day in a second, although the wire-netting partitions which surrounded them were quite six feet high. The only explanation is that she must have climbed the fence,

as she could certainly not have gone through it. In some of the enclosures there are hedges of *Thuja*, with a wire-netting fence two feet high in front of them, to prevent the Geese getting underneath. The female finally decided to make her nest under one of these hedges. To get there she was seen to jump upon this two-foot-high fence, balance herself on the thin top, and plunge into the hedge. She scraped a little round depression in the soil under the evergreens, and then laid her eggs, accomplishing her jumping-feat each time that she wanted to go in or out of her nest. Unfortunately she did not care to sit, so that we had to put her eggs under a bantam hen: I am sorry to say, however, that they did not hatch, but proved to be unfertile. The eggs are yellowish white, and rather more pointed at one end than the other.

Gooilust, s'Graveland,
30th October, 1903.

V.—*The Linnean Motacilla stapazina identified and restored to use.* By T. SALVADORI, H.M.B.O.U.

LOOKING through the pages of the recently published vol. iv. of the 'Hand-list of the Genera and Species of Birds,' by Dr. Bowdler Sharpe, I happened to stop at the genus *Savicola*. I was rather surprised to find that no species bore the familiar Linnean name *stapazina*, which is (p. 179) relegated to the synonyms of *Savicola rufa* (Steph.). That a Linnean name should stand as a synonym of one published more than fifty years later seems to be quite against the rules of nomenclature!

I know that the name *stapazina* has been too often misunderstood, so that many mistakes have been made by ornithologists, who have applied the term to two different species—the Black-eared Wheatear (*Savicola albicollis* Vieill. = *S. aurita* Temm.) and the Russet Wheatear, which has the throat black, whereas the former has it white. Should the difficulty of identifying Linné's *Motacilla stapazina* be insuperable, I quite understand that we ought to give up